CATS
CAPITOL AREA TIMEX/SINCLAIR USERS GROUP

NEWSLETTER

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PRESIDENT'S MESSAGE

December sees the end of the first six months of the current terms of office of your officers and directors. Last May and June, it was not at all clear that the club would continue in existence for long. In fact, one suggestion put to the nomination committee was that I accept the presidency for three months and then see if the club shouldn't be disbanded on grounds of falling interest. Obviously, since then, membership has grown to new heights, and there is increased interest in our special interest groups.

Especially active has been the Hardware Workshop. Under Tom Bent's tutelage, dozens of Oliger cartridge boards with Spectrum emulators, as well as expansion boards, have been built at the morning sessions on our regular meeting day. Various computer modifications have been made and, in general, machine performance and reliability has been enhanced.

Best of all, the Spectrum emulator has given us a new machine that can run hundreds of English programs with the promise of more and better programs to come, since the Spectrum continues to be one of the world's more popular computers. An outstanding example is Omnicalc II, an integrated spreadsheet that includes a graphics capability and that can transfer data from one sheet to another.

Good people like Tom Woods and John Oliger are making available to us both machine and program enhancements that will prolong the usefulness of our machines for some years to come. They, and other suppliers, must be fully supported in our own best interest.

Our Newsletter, under the direction of editor Mark Fisher, with the support of his wife Sarah plus logistics backup by Jules Gesang, continues to be one of the best of its kind. Membership support in writing of articles and programs is continuing at a high level in both quantity and quality.

With continued support from the membership, I am looking forward to a good, active second half for our administration. Certainly I see no reason why the group cannot continu into the indefinite future.

Merry Christmas to all. And may the New Year bring you joy and successful computing.
John Conger

From The Editor

Happy New Year! I'm writing this before the December meeting in order to allow enough time for the Post Office to deliver this to you before the January meeting. As a result, there isn't any news of the December meeting. Item one is –

RENEW!

Dues are $16.00 a year – if you don't renew, CATS can't continue at the level we sustained last year. As an incentive, all renewalls at the $16.00 level will recieve a copy of the club roster, sorted both by last name and ZIP, printed on fine, collector grade xerox paper.

Late word from John Sampson in New York (a CATS member): December's 1000 Hi-res Mandelbrot program works, and he's going to concentrate on the mysterious bug that produces a repetitive pattern after a screenful has been generated. He's got five 1000's, so I guess that he can dedicate a couple to exploration of the set.

In related news, CTM magazine also has run a Mandelbrot program for the 2068. Unlike CATS' it dosen't use hi-res, but the author made up for that by creating a mosaic of 12 screen-fuls. OK, Jake, where are your results?

Fisher's ad-hoc awards:

Most heavy-duty information in a newsletter: tie between LIST and Sincus News.

Most improved: Hampton Roads N/L. Really worth a look at the next meeting. Timelinez is a close runner-up.

Best layout: ATSU Newsletter; clear three column format, all copy retyped, all illustrations carefully matted – wow!

Least legible: tie between all newsletters that run 80% reductions of handwritten letters to the editor (YOU know who you are).

For those of you keeping score, T/S Horizons is not out of the running yet. Time Designs is rolling along, and SUM has just added some substantial writing talent to their fund. Tom Wood, publisher of Syncware News and Pro-File Notes, has added the quarterly Memonotes, covering both the cartridge and tape versions of Memotext and Memocalc. Issue 1 is extremely substantial – recommended for anyone using either of these premier T/S 1000 programs.

The Roster:

As mentioned above, the 1985 end-of-year roster is available. It's sorted both by last name and ZIP, so you can get a handle on who to car-pool with to get to the meetings. Current members can pick it up at the meeting, or send me a SASE, and I'll mail one out to you.

TAPE DUBBING

BY Jim MacKenzie

I have thirty four minutes of new TS 1000 programs in the library. This makes a grand total of one hundred and four minutes! I am curious if anyone has a copy of either 'WORM' a word processor, or 'BSOS' a bank switching program, both were published in TS HORIZONS this year.

The bad news is I don't believe I'll be able to make this month's (14 DEC) meeting. It's now a week before the meeting, and I spent fifty five hours this week working. So I once again ask for someone to help out just when i'm not there. Mark Fisher will bring the equipment and show how it works.

Next month's newsletter will have a complete list of the TS 1000 library. It's a little longer than a full page so keep the contributions comming. Mark, Sarah, or myself are always happy to accect the program loans, at the meeting, or home.

One of the new programs is a 700 byte MC program that I have written and donated to the library. It merely prints a numerical display of the computers memory. It shows ramtop, program size, variable size, free space, display size, and syncsum. This data is included in the library list that will be in next month's news letter. Merry Christmas!

Mark Fisher 301-589-7407

Jim MacKenzie 301-495-9139 After 7 pm

OFFICIALDOM

President	John Conger
Vice President	Jules Gesang
Vice President	Tom Bent
Secretary/Treasurer	Sarah Fisher
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N/L Production	Sarah Fisher
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David Dell'Orfano	Rodger
Mark Fisher	Skip Romaner
Leo Godet	Karl Smith
Hampton Roads N/L	Vernon Smith
Barry Henley	Bob Whitaker
David Hosher	Joe Williamson

N/L Deadline	Meeting Date
	January 11
January 17	February 8
February 14	March 8
March 14	April 12

LETTERS

Capitol Area T/S Users Group
P.O. Box 725
Bladensburg, MD 20710

Dear Folks,

I am an avid Timex/Sinclair computerist and am interested in joining your organization to learn more about computing, and eventually contribute information to the group. Please advise me of the annual fees associated with membership and send any information available about the group. My address is shown below:

Jim Hahn
1415 Holly Drive East
Broomfield, CO 80020

Thank you for your time.

Sincerely,

Jim Hahn
Jim Hahn

P.S. Has anyone ever figured out a method for reversing the ink and paper colors in TASWORD II for use on a green or amber monitor?

DATE: 11/12/85

SUBJECT: Food for Thought for News letter.

TO: C.A.T.S.
P. O. Box 725
Bladensburg, MD 20710

MESSAGE: Mark Fisher: Mark as a new comer to the club I think it would help me and possibly others to have a Trading Post section in the news where we can advertise to sell, trade or whatever. See my press ready copy for your consideration for the next issue. Also What about a questions and answer section with the answers being discussed at the meeting. Maybe I am just to much of an amerteur with the electronics part, but I have found that the knowledgeable computer bugs smokescreen too much of what you otherwise said clearer in stright foward language. See you at the next meeting. P.S. will CATS be able to buy the QL at a discount for its members?

SIGNED: George Rey

Thank you,

Bret Lanius

Atlanta TS Users Group
c/o Bret Lanius
1049 N Carter Rd
Decatur, GA. 30030
404-294-2561

John M. Shaffer
293 E. Academy St. #4
Hughesville, PA. 17737

November, 22 1985

Capitol Area Timex/Sinclair User's Group
P.O. Box 725
Bladensburg, Md. 20710

Fellow computerists,

I would like to thank you for your consideration, including me on your newsletter mailing list. Some of you may recall that I left the area in June of 1984 and in so doing, left the CATS group. I had also sold my Timex equipment and software to help offset the cost of purchasing a Commodore 64 and peripherals.
It turns out that this was fortunate for the only user group that was nearby here in northeastern Pennsylvania was located in Williamsport, Pa. The group is known as The West Branch Commodore User's Group or more succinctly, WBCUG. Hughesville is about sixteen miles from Williamsport so, it is close enough for me to keep in touch with others in the organization.

Last April I was approached to take over the editorship of the newsletter and, being flattered by the request, accepted. As of now I am the editor and most productive contributor, however, the November issue seems to have broken the ice in this respect, at least I hope that it is a trend. In past issues I have printed some of Mihaly Grells efforts, giving credit where due, and they were accepted enthusiastically by many. I converted the 'Sphere' program and the '3d' program to Commodore basic and they performed very well in this media. The name of our group organ is "The Comm-Do'er" and a copy of the last issue is attached to this missive.

Perhaps we might get some ideas from one another for listings or algorithms. I shall try to get one of our newsletters off to you monthly, at the very least you will have some idea what's going on in another camp.

I wish to take this opportunity to wish your group the best for the future, your vitality, in the face of Timex's abandonment, is nothing short of amazing. May you continue to grow! I also want to wish all of you a safe and joyous holiday season. Give my regards to 'Uncle Clive', without him I may never have discovered computing......

Best Wishes

Jack Shaffer

C.A.T.S. 3 January

SyncWare News

P.O. Box 64, Jefferson, N.H. 03583

Dear Fellow Timex Computer Enthusiast,

For the past 2 years, SYNCWARE NEWS has devoted itself to providing some of the meatiest subject matter you can find anywhere about ZX/TS computers. Now, with its third volume just beginning, we would like to invite you to subscribe to our journal.

If you use a Timex or Sinclair computer, you'll find we have a lot to offer. We have articles coming up like:

*How to expand memory on the TS2068
*Building your own data base program or word processor
*Beginning machine code
*Advanced programming tips: How to use floating point numbers

We at SYNCWARE NEWS want to stimulate your imagination, we want to give you ideas and computer know-how, and we want to show you what makes your computer tick. Each issue is packed with articles on hardware improvements and add-ons, programming tips, updates on new products, and program listings.

Even though Timex has quit the computer scene, SYNCWARE NEWS has discovered that there's still a tremendous following for our little computers. We are a forum for this wide diverse interest. We help bring it all together. Won't you please join us? We're sure you'll be very pleased.

- -

SyncWare News

P.O. Box 64
Jefferson, NH 03583

Telephone: 603-586-7734
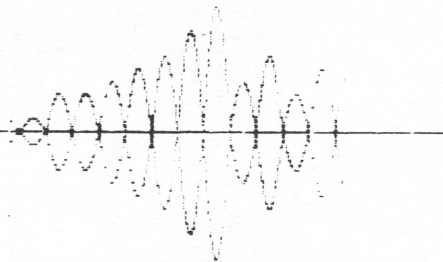
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MSCRIPT QUICK FIX
Taming the Space Bar

Having used both TASWORD and MSCRIPT the latter's annoying space bar skip needs a cure to make word processing a time-saving proposition.

The solution is given in Jeff Mazur's Intermediate/Advanced Guide (SAMS), on page 214. You can change the auto-repeat feature by POKEing a longer delay, which is normally set at 1/12th of a second.

The POKE is at address 23562. The value at this location indicates the delay, which initially is 5. Changing this to a larger number up to 225 will lengthen the delay. It will affect all keys, but if the value is reasonably set the space bar problem is cured without hindrance to normal typing.

On my 2068 I found that

        POKE 23562,20

entered before LOADing MSCRIPT did the trick. Slightly larger values may work better on other 2068s. Experimenting with them has a useful payoff.

                            Bob Whitaker
                            Arlington, VA

PUG NEWS
by George Mockridge

Timeliner 9-85

At our August meeting Bob Orffelt announced the completion of his long awaited DOCKIT manual. Also known as the EPROM MANUAL FOR THE TS 2068 COMPUTER WITH ROM DISASSEMBLY, this 110 page manual has taken a year to produce. A limited number of copies are now available at Sunset Electronics for $17.95.

Also available at Sunset Electronics for $30 is Jay Brockman's QUADRA-PORT. This board connects to the 2068 cartridge port and allows you to select between 4 EPROMS which you buy seperately and plug into the board. Instead of slow tape loading waits, you now have instant access to you favorite and most used programs.

Don't forget to
PAY YOUR DUES

November 12, 1985

Dear Mark:

Herewith a couple of items for the CATS Newsletter. The smaller one is the more useful - the larger one a space-filler if needed. Please feel free to edit.

Having had to miss several meetings since early summer, I'm not current on what has been covered in them. However, if not recently discussed, the subject of printers might be an appropriate topic.
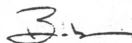
This comes to mind from a conversation with another individual at the November meeting. Like me a few months ago, he was interested in buying a full-size printer, but had no idea of features or relative merits among affordable choices, whether an interface was needed and if so, which one, etc.

Largely due to a favorable review in Creative Computing (there's another one down the tube!) I mail-ordered a STAR SG-10, which turned out to be the right choice for my needs. It could have been otherwise, though, had I not had the time to dig through the literature.

Addressing the quirks of imbedding printer codes is an allied topic. I was surprised so few were interested in that at the last meeting - perhaps because it was related to MSCRIPT.

Your help and that of others in the group has made the difference for me between frustration and progress in this alien world of computers. I'm indebted to all of you.

                            Regards,

                            Robert M. Whitaker
                            4730 Old Dominion Drive
                            Arlington, VA 22207

MORE INTERFACING

VERN, VERN, VERN_____
Letter to the Editor

A letter from Vernon Smith of Fairfax, VA (Washington DC area) to ATSU'S MEMOTECH Users Sub-group was seen by Donald Guess, Jr. who edits that section of the magazine and is creative director for the whole publication.

Donald contacted me about the letter. Don always kept me informed about how these interface troubles are on the rise within the Sinclair world of computing. This letter touched off the effort compiled within the first half of this issue. Don contacted Mr. Karl Smith in Pataskla, Ohio. Karl has just about every type of ROM switching device or software, interfaces, and word processor programs. Karl has experience working with different types of combinations of all the above.

Vern's letter was forwarded to Karl which appears below. Karl's answer back to Vern was detailed and well done. Because we know alot more of you are having the same troubles explained below; we decided to publish these letters and the preceeding articles.

August 14, 1985

Dear Sirs,

I am writing you to see if you can assist me in clearing up some of my printing problems. I have a Timex Sinclair 2068 computer with a Russeel ROM switch and a MEMOTECH DMX80 printer. I have two interface units, an AERCO and a TASMAN Type B which was purchased, with software, in England.

The first problem comes when running the Spectrum version of Tasword II with the Tasman interface. Following the Tasman I/F directions, I customized the interface and saved it to tape. I then took the following steps:

1. CLEAR 64715
2. LOAD "" CODE (For the Tasman I/F)
3. RAND USR 64719
4. LOADed Tasword II and "Tutor" text file
5. Exited to Print mode, answered spacing & line feed questions and then tried to print.
6. Screen showed "Press q to stop printing" but printer did not activate. Tried to return to text file and/or break into program with no luck. Had to turn off power to get out of print mode.

I am really stumped since I use the same Tasman I/F code with Omnicalc II and it works correctly. I also have a copy of Tasprint and have been able to use the Tasword program with it.

My second question concerns the AERCO I/F. I am trying to use it with the 2068 version of Tasword II. I know the I/F is OK since I am able to run the same indications as I do with the Tasman. I haave been told that you don't use the driver software but instead use a series of POKEs. If this is so, could you furnish them to me along with their addresses.

My last question concerns using Omnicalc II with either the AERCO or Tasman I/Fs'. I would like to know how I can get Omnicalc to print out in the condensed mode rather than either the Elite or Pica modes that I get by setting the printer dip switches. Without the condensed type, I'm only able to get 9 columns; but with condensed print I'd be able to get an entire years's spread sheet on the page. Any help on this problem would be greatly appreciated.

Sincerely yours,
Vernon R. Smith

_____

Vernon,

My name is Karl Smith. I am a member of the ATSU Home Computer Users. I was contacted by Don Guess, club vice-president, in regards to some difficulties you were having with the Tasword II and Omnicalc II programs.

My stituation seems to be somewhat similar to your's in that I have a 2068 computer, DMX80 printer, AERCO centronics interface and the two programs you mentioned in your letter. I can relate to you some of my own experiences with this software. Hopefully they will be of some benefit to you.

The enclosed sheets describe how I approached the situation. In addition to the attached sheets, here are some more goodies available with the Tasword program.

Multiple Printouts (full width printers)

Add the following lines:
```
251 LET i=14: PRINT AT i,0; "No of copies
    (1)": GOSUB 6000: IF a$=" " THEN LET
    a$="1"
252 LET k=VAL a$
279 FOR i=1 TO k
281 NEXT i
```

If q is pressed to quit printing, it must be held down for some time and some of the start of the text will be repetitively printed before printing stops.

Left Margin on Printing

The following program line can be added by users who frequently wish to change the left margin on printing and advoids having to go through the "define graphics/printer option":
```
253  LET i=16: PRINT AT i,0; "Left Margine
("PEEK 60927;")": GOSUB 6000: IF a$ <> " "
THEN POKE 60927,VAL a$
```

Modifying The Help Pages

To modify the normal mode help page enter Basic and execute:
```
FOR i=0 TO 1535: POKE (33280+i),PEEK
(54784+i): NEXT i
```

The 2068 takes several seconds to execute this statement. Now RUN Tasword and you will find the help page in the text file. Make the required modifications then enter Basic again and execute:
```
FOR i=0 TO 1535: POKE (54784+i),  PEEK
(33280+i): NEXT i
```

To modify the extended mode help pagee replace 54784 in the above expressions with 56320.

I found that the two new features (multiple printouts and left margin on printing) would not defualt to (1) and (8). In any case it required a positive input to keep the program from crashing. I have had conversation with others who did not have this problem. If you do merely input the values and there should be no problem.

Instructions for Loading Tasword II
(AERCO Interface)

```
%Load Tasword II
%Go into Basic
%Enter the following POKEs:
  POKE 57999,127:
  POKE 58014,219:
  POKE 58008,127:
  POKE 58001,103:
  POKE 58015,127
Then RUN and make a back up copy.
```

This procedure will allow your word processor to work without the need for print driver software.

/cont/

/VERN, cont.../
OMNICALC II

1. Load customized relocatable print driver at 64000 (if the auto feed feature is turned off on printer, be sure to turn it on in the print driver (POKE 64005,10))
2. Activate print driver (RANDOMIZE USR 64000)
3. POKE 64004,131 (for 132 column width)
4. LPRINT CHR$ 15 (for compressed print)
5. LOAD on64000 or to64000 (the attached sheet was done on the Timex version)
6. LOAD or INIT data
7. Enter function p
8. Select "All" or "Sector"
9. Select up to 15 columns

In the compressed mode you can print up to 15 columns across. Any use of the histogram feature (6 address is 64450 and is entered after pressing the x function) will return the printer to the standard print size.

Evidently data produced on the Spectrum software can be LOADed and processed by the Timex program.

I hope you find this of some assistance. Keep in touch.

Karl Smith

/Editors note: We hope these pages have been helpful. As always if you wish to contribute drop us a note to ATSU HOME COMPUTER USERS, PO BOX 16274, COLUMBUS, OH 43216,USA or via MCIMail to Ray Thornton or Donald Guess, Jr.
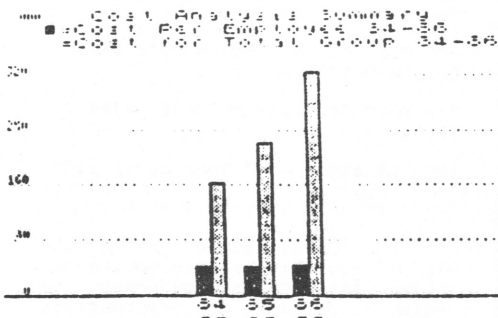
omni calc	JAN 84	FEB 84	MAR 84	APR 84	MAY 84	JUN 84	JUL 84	AUG 84	SEP 84	OCT 84	NOV 84	DEC 84	ANNUAL TOTAL	AVG PER EMP
A11	9043	12203	12143	11500	12014	12102	8208	8419	8692	8585	9092	12203	124204	33568
A12	3186	1054	552	1326	1538		2794	2187	947	1964	1004	824	17376	4696
A13			295	423	-141						150		727	196
A21	-133												-133	-36
A22	-66									109			43	11
A23										191			191	51
A31							2752						2752	743
AII	12030	13552	13118	12685	13552	12102	13754	10606	9639	10849	10246	13027	145160	39232
B12										7	14		21	5
B13										5	11		16	4
B25										2	5		7	1
B26										-1	2		1	0
B27										1	3		4	1
B28										1	2		3	0
BII	0	0	0	0	0	0	0	0	0	15	37	0	52	14
C11	9	15	19	30	16	3	54	23	28	20	7	352	576	155
C12	1361	333	923	464	936	251	375	1061	686	830	842	787	8849	2391
C13										753			753	203
C14			519		297								816	220
C22			9				79	35	-1			147	269	72
C23	107				44	89		19			134	101	494	133
C32	19						54	259					332	89
C38	350	415	293	62	656	359	677	187	418	382	231	392	4422	1195
C43	92		34	82	178	169	64	28		31	53		731	197
C44									75		42	50	167	45
CII	1938	763	1797	638	2127	950	1205	1371	1466	2016	1309	1829	17409	4705
D21	88	61	177	35	139	134	131	3	63	40	179	15	1065	287
DII	88	61	177	35	139	134	131	3	63	40	179	15	1065	287
TOTAL	14056	14376	15092	13358	15818	13186	15090	11980	11168	12920	11771	14871	163686	44239

omni calc	PER EMP 84	PER EMP 85 PROP	PER EMP 86 PROP	INC FOR 85	INC FOR 86	TOTAL 84	TOTAL 85 PROP
A11	33568	34239	35266	2% INC	3% INC	124204	171195
A12	4696	4789	4932	. . .	. . .	17376	23945
A13	196	199	204	. . .	. . .	727	995
A21	-36	-37	0	. . .	. . .	-133	0
A22	11	11	11	. . .	. . .	43	55
A23	51	52	53	. . .	. . .	191	260
A31	743	757	779	. . .	. . .	2752	3785
AII	39232	40010	41245			145160	200235
B12	5	5	5	. . .	. . .	21	25
B13	4	4	4	. . .	. . .	16	20
B25	1	1	1	. . .	. . .	7	5
B26	0	0	0	. . .	. . .	1	0
B27	1	1	1	. . .	. . .	4	5
B28	0	0	0	. . .	. . .	3	0
BII	14	11	11			52	55
C11	155	158	165	. . .	5% INC	576	790
C12	2391	2438	2681	. . .	10% INC	8849	12190
C13	203	0	0	. . .	DELETE	753	0
C14	220	224	280	. . .	25% INC	816	1120
C22	72	73	75	. . .	3% INC	269	365
C23	133	135	139	. . .	. . .	494	675
C32	89	90	92	. . .	. . .	332	450
C38	1195	1218	1339	. . .	10% INC	4422	6090
C43	197	200	205	. . .	3% INC	731	1000
C44	45	45	46	. . .	. . .	167	225
CII	4705	4581	5022			17409	22905
D21	287	292	321	. . .	10% INC	1065	1460
DII	287	292	321			1065	1460
TOTAL	44239	44894	46533			163686	224635

Cost Analysis Summary
■=Cost Per Employee 84-86
■=Cost for Total Group 84-86

ATSU N/L Oct, '85
PO Box 16274
Columbus OH 43216

Please write and tell us what you think of the three column format.

C.A.T.S. 7 January
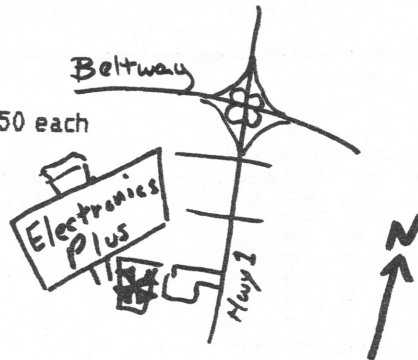
CRYPTOGRAM:

BPPZ XPC S IPPA SRRBTUSOTPE

RCPICSY. TO USE YSZN SBB OWN

ATXXNCNEUN DWNE MPL ANUTAN

DWNOWNC MPLC UPYRLONC

ISOWNCG ASOS PC ALGO.

AERCO INTERFACE WITH THE SPECTRUM ROM
by Joe Williamson
(SUM, of Gainesville, FL. April'85, via TIMELINEZ, Pacifica, CA. Aug'85)

If you have converted our 2068 to a Spectrum and have the Aerco parallel printer interface, here are the changes needed to run the print driver software supplied with the interface while in Spectrum mode.

First, place your computer in Spectrum mode and load in the Aerco print driver software. When loaded, break into BASIC (don't initialize it like the program tells you to do- you'll just crash). Once in BASIC, LIST line 9992 and EDIT. On line two and three where it says POKE 26704 and POKE 26703, change the 26704 to 23750, and change 26703 to 26749. Press ENTER. In the immediate mode (no line numbers) enter:

POKE 64441,201

POKE 64521,84

POKE 64522,31

Now run the program with GOTO 1 and choose the initialize routine. You are now set up to drive your printer while in Spectrum mode! Be sure you save this version.

Loading Tasword II on the A & J Microdrive

Using the A & J Microdrive to load Tasword II takes less than 30 seconds! But to SAVE the program and files created by it requires some modifications to the BASIC part of Tasword II.

To make the changes, LOAD Tasword off tape and choose the BASIC option. DELETE lines 11, 15, 700 and 710. Now add the following lines:

15 POKE VAL "23609", VAL "2": CLEAR VAL "33279": GO SUB VAL "4000": LOAD "@tasword"CODE: CLS: LET a=USR VAL "59061": GO TO VAL "10"

700 CLS: LET a$="@tasword": SAVE "@1,tasword"LINE 15

710 SAVE "@2,tasword"CODE 54784, 10751

1060 IF a$(1)<>"@" THEN GO TO 1100

1070 LET a$(2 TO)=a$(4 TO)

These changes allow you to use either cassette or microdrive for saving files. Just remember to begin files for the microdrives with @ and the number of the file followed by a comma and the file name up to 7 characters long. Files without the @ will save to the cassette. (Example: @1,sample)
To SAVE Tasword to microdrive after the above changes GO TO 1 and then select the "Save Tasword" option. Save it on a 20' cartridge with no other files on it.
To LOAD Tasword, type LOAD "@tasword" RETURN.   -- Joe Williamson

SUM 4/85

TELECOMMUNICATIONS

The Timex Sinclair Amateur Radio Users Group

The Timex Sinclair Amateur Radio Users Group is made up of computer users who are interested in putting their Timex or Sinclair computers to use in amateur radio operations. Organized more than four years ago, most of the members are not computer experts; but they do have a good technical background in electronics, so they quickly learn quite a lot about their computers. Most, but not all, members are licensed by the Federal Communications Commission to operate in the amateur radio service and one of the main reasons these amateurs bought their computers was to use them in their radio operating activities.

The journal of this group is called QZX. The name was patterned after some of the abreviations for operating procedures used by amateurs and after some other magazines with which amateurs are familiar. The journal is the main benefit of membership. It is sent monthly by first class mail to all members. Membership costs $12 per year (with a $13 postage surcharge for members who live outside of the United States, Canada, and Mexico). The journal publishes complete programs and hardware projects submitted by members. The journal also publishes personal items about the members and information about operating events such as nets in which the members might be interested.

The group is a small but active collection of people who are working hard to expand the usefulness of their computers by writing programs and buying and inventing hardware additions. There are members in almost every state and in about 20 different countries.

Those who wish to join (and they need not be licensed amateurs) can do so by sending $12 dues to Alex. F. Burr, K5XY; 2025 O'Donnell Drive; Las Cruces, NM, 88001.

For a sample article from QZX, see p.12.

NEW HAM RADIO BULLETIN BOARD

The Timex Sinclair Amateur Radio Users Group (TSARUG) has organized a FIDO NETWORK node to serve the members of the organization and others interested. Messages can be sent to network 15 node 1006 (15/1006). The bulletin board can be accessed directly at (505) 646-5194. Files available include early copies of articles to appear in QZX, the group newletter. For more information send SASE to Alex. F: Burr, K5XY, 2025 O'Donnell, Las Cruces, NM 88001.

For more information about FIDO, see CATS N/L, 7/85.

RESTRICTED INFORMATION
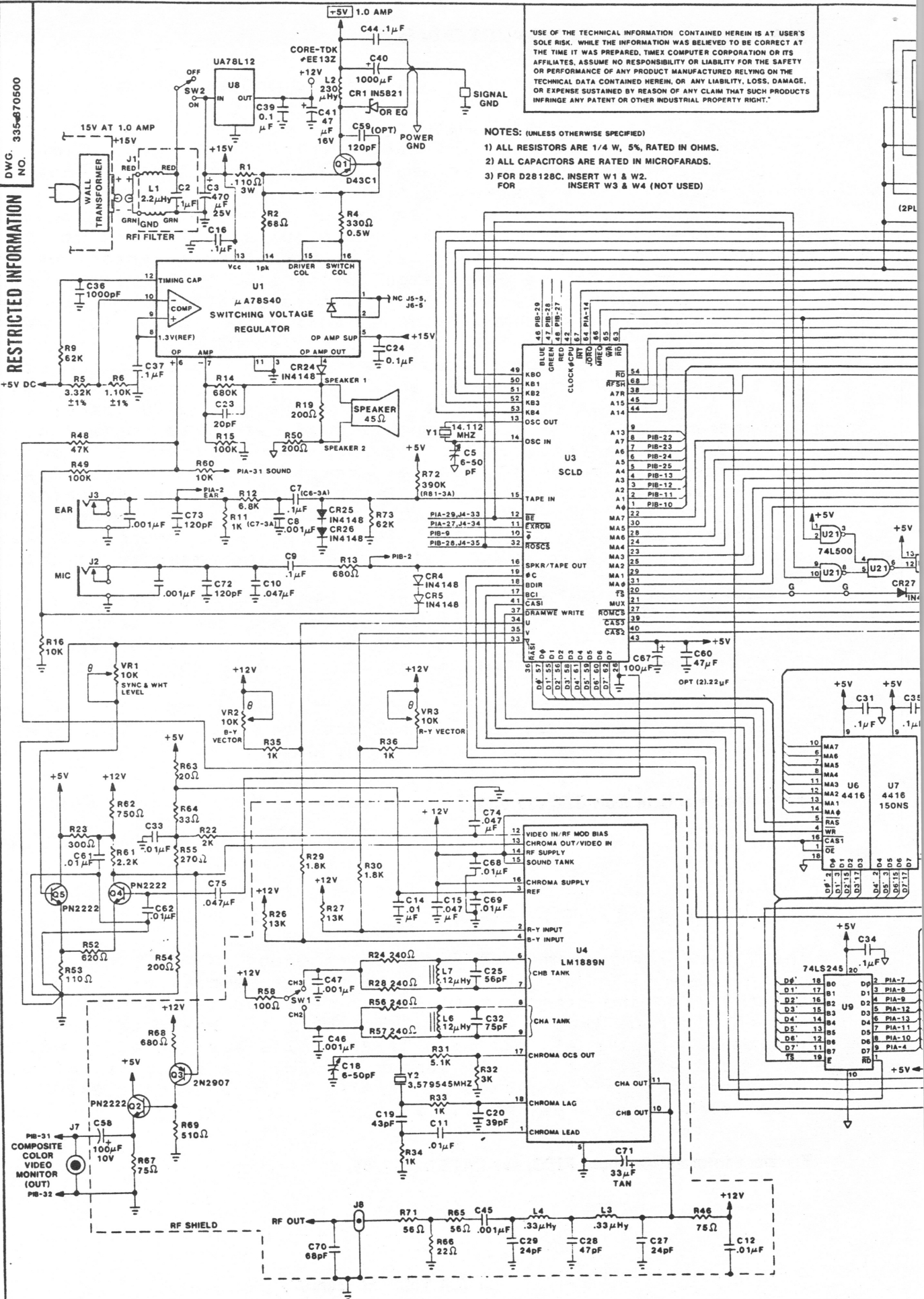
DWG. NO. 335-070500

NOTES: (UNLESS OTHERWISE SPECIFIED)
1) ALL RESISTORS ARE 1/4 W, 5%, RATED IN OHMS.
2) ALL CAPACITORS ARE RATED IN MICROFARADS.
3) FOR D28128C, INSERT W1 & W2.
   FOR   INSERT W3 & W4 (NOT USED)

+5V 1.0 AMP
C44 .1µF
CORE-TDK #EE13Z
+12V
C40 1000µF
CR1 1N5821 OR EQ
SIGNAL GND
L2 230µHy
POWER GND
C59 (OPT) 120pF
Q1 D43C1

UA78L12 U8
SW2 OFF/ON
C39 0.1µF
C41 47µF 16V

WALL TRANSFORMER
15V AT 1.0 AMP
+15V
J1 RED/RED/GRN/GND/GRN
L1 2.2µHy
C2 1µF
C3 470µF 25V
C16 .1µF
RFI FILTER
R1 1.110Ω 3W
R2 68Ω
R4 330Ω 0.5W

U1 µA78S40 SWITCHING VOLTAGE REGULATOR
TIMING CAP
COMP
1.3V (REF)
OP AMP
Vcc
1pk DRIVER COL / SWITCH COL
OP AMP SUP
OP AMP OUT
+15V
C24 0.1µF
C36 1000pF
CR24 IN4148
NC J5-5, J6-5
SPEAKER 1
SPEAKER 2
SPEAKER 45Ω

R9 62K
R5 3.32K ±1%
R6 1.10K ±1%
+5V DC
C37 .1µF
R14 680K
C23 20pF
R15 100K
R19 200Ω
R50 200Ω

R48 47K
R49 100K
R60 10K
PIA-31 SOUND

EAR J3
C73 .001µF / C74 120pF
R12 6.8K
R11 1K (C7-3A)
C7 (C6-3A) .1µF
C8 .001µF
CR25 IN4148
CR26 IN4148
R73 62K
PIA-29,J4-33
PIA-27,J4-34
PIB-9
PIB-28,J4-35

MIC J2
C72 .001µF / 120pF
C10 .047µF
C9 .1µF
R13 680Ω
PIB-2
CR4 IN4148
CR5 IN4148

R16 10K
VR1 10K SYNC & WHT LEVEL

U3 SCLD
BLUE / GREEN / RED / JORD / WRED
CLOCK 4CPU
PIB-20 / PIB-28 / PIB-27 / PIA-14
INT
RD / RFSH / A7R / A15 / A14
KBO / KB1 / KB2 / KB3 / KB4
OSC OUT / OSC IN
Y1 14.112 MHZ
C5 6-50 pF
R72 390K (RB1-3A)
TAPE IN
A13 / A7 / A6 / A5 / A4 / A3 / A2 / A1 / A0
PIB-22 / PIB-23 / PIB-24 / PIB-25 / PIB-13 / PIB-12 / PIB-11 / PIB-10
MA7 / MA6 / MA5 / MA4 / MA3 / MA2 / MA1 / MA0
BE / EXROM / ROSCS
SPKR/TAPE OUT
øC / BDIR / BCI / CASI / MUX
DRAMWE WRITE / ROMCS / CAS3 / CAS2
U / V
D0 / D1 / D2 / D3 / D4 / D5 / D6 / D7

74L500 U21
C67 100µF / C60 47µF OPT (2.22µF)

U6 4416 / U7 4416 150NS
MA7 / MA6 / MA5 / MA4 / MA3 / MA2 / MA1 / MA0
RAS / WR / CAS1 / OE
C31 .1µF / C35 .1µF

VR2 10K B-Y VECTOR
VR3 10K R-Y VECTOR
R35 1K / R36 1K

R63 20Ω
R62 750Ω
R64 33Ω
C33 .01µF
R23 300Ω
R61 2.2K
R55 270Ω
R22 2K
C61 .01µF
Q5 PN2222
Q4 PN2222
C75 .047µF
C62 .01µF
R52 620Ω
R53 110Ω
R54 200Ω

R29 1.8K
R30 1.8K
R27 13K
R26 13K
C14 .01 / C15 .047 / C69 .01µF

C74 .047µF
VIDEO IN/RF MOD BIAS
CHROMA OUT/VIDEO IN
RF SUPPLY
SOUND TANK
CHROMA SUPPLY
REF
R-Y INPUT
B-Y INPUT

U4 LM1889N
R24 240Ω / R28 240Ω
L7 12µHy / C25 56pF
CHB TANK
R56 240Ω / R57 240Ω
L6 12µHy / C32 75pF
CHA TANK
R31 5.1K
CHROMA OCS OUT
Y2 3,579545MHZ
R32 3K
R33 1K
C20 39pF
CHROMA LAG
C19 43pF
C11 .01µF
R34 1K
CHROMA LEAD
CHA OUT
CHB OUT
C71 33µF TAN

R58 100Ω
SW1 CH3/CM3/CM2
C47 .001µF
C46 .001µF
C18 6-50pF

R68 680Ω
Q3 2N2907
+5V
R69 510Ω
Q2 PN2222
J7 C58 100µF 10V
R67 75Ω
COMPOSITE COLOR VIDEO MONITOR (OUT)
PIB-31
PIB-32

74LS245 U9
D0 / D1 / D2 / D3 / D4 / D5 / D6 / D7
B0 / B1 / B2 / B3 / B4 / B5 / B6 / B7
Dp / PIA-7 / PIA-8 / PIA-9 / PIA-12 / PIA-13 / PIA-11 / PIA-10 / PIA-4
C34 .1µF

RF SHIELD
J8 RF OUT
R71 56Ω / R65 56Ω / C45 .001µF / L4 .33µHy / L3 .33µHy / R46 75Ω
R66 22Ω
C70 68pF
C29 24pF / C28 47pF / C27 24pF
C12 .01µF
+12V

BRUNING 44131 22870 3

KEYBOARD

CR11 IN4148 x 8
CR8
CR7
CR6
CR9
CR10
CR12
CR13

DIR	OPERATION
L	B→A
H	A→B

+5V
C56 .1µF

74LS245
U15

18 RFSHB PIA-26, J4-32
17 MREQB PIA-17, J4-18
16 IOROB PIA-18, J4-19
15 WRB PIA-20, J4-23
14 RDB PIA-19, J4-21
13 A13B PIB-16, J4-4
12 A14B PIB-15, J4-1
11 A15B PIB-14, J4-16

+5V C55 .1µF

CPU CLK

74LS157 U10
+5V C30 .1µF

74LS244N U5

74LS157 U11

U16 23128 (NEC) 250NS 16K x8
R70 10K

U19 CPU Z80A Z8400

NMI R40 10K PIA-15
WAIT R41 1.5K PIA-22
BUSREQ R42 1K PIA-23
RESET R43 220K PIA-24

HALT BUSACK MI
PIA-16 PIA-25 PIA-21
J4-22

CR28 IN4148 U21
R74 390Ω

A7RB PIA-3

W1 W4 W3 W2 SEE NOTE 3

+5V C48 .1µF

REFERENCE DESIGNATIONS

LAST USED	NOT USED
C75	C1, 13, 26
CR28	CR2, 3
L8	
Q8	Q6
U21	U2
VR3	
R75	R8, 10, 17, 18, 20, 21, 25, 37, 39, 47, 47, 51, 59
W4	
SW2	
Y2	

+5V C49 .1µF +5V C57 .1µF +5V C52 .1µF +5V C53 .1µF

U12 4416 U13 4416 200NS
U17 4416 U18 4416 200NS

AR7B PIA-3
A7RB PIA-3

+5V C54 .1µF

PIB-17, J4-3
PIB-18, J4-30
PIB-19, J4-28
PIB-20, J4-26
PIB-21, J4-24
PIB-22, J4-25
PIB-23, J4-27
PIB-24, J4-29
PIB-25, J4-31
PIB-13, J4-1
PIB-12, J4-12
PIB-11, J4-10
PIB-10, J4-8

U20 2364 8Kx8 MASK ROM 250NS

19 D7 PIA-4, J4-6
18 D6 PIA-10, J4-11
17 D5 PIA-11, J4-13
16 D4 PIA-17
15 D3 PIA-12, J4-15
13 D2 PIA-9, J4-9
12 D1 PIA-8, J4-7
11 D0 PIA-5, J4-5

EXROM PIA-27, J4-34

J5 JOYSTICK J6 JOYSTICK
PLAYER 1 PLAYER 2

AY-3-8912 U14

D0 C
D1 TEST
D2 Vcc
D3
D4 A
D5 GND
D6 IOA7
D7 IOA6
BC2 IOA5
A8 IOA4
BC1 IOA3
BDIR IOA2
RESET IOA1
CLOCK IOA0

PIA-30
R38 1K
C50 .1µF

C21 1µF,16V

J4 CARTRIDGE
COMPONENT SIDE
NONCOMPONENT SIDE

TS 1000 COMPATIBLE (TIMING IS DIFFERENT)
COMPONENT SIDE
NONCOMPONENT SIDE

TDK-BEAD BF03-3.5x5x1.0x2
L8 L5
Q7 2N3904 R44 20K A9
Q8 2N3904 R45 20K
IN4148x10

SPKR TAPE OUT EAR SLOT

PI EXPANSION
C64 120pF C65 120pF C63 120pF

DO NOT SCALE DRAWING

MATERIAL			
SPEC		CHKR	
SIZE & TOL		DWN N PARSONS	
TEMPER		DATE FEB 84	
PHY SPEC		REF	
		FIRST USED ON M2068	SCALE NONE

SUPERSIDES SUPERSIDED BY

TIMEX
COMPUTER CORPORATION
WATERBURY CONN · 06720

NAME
TS2000 SYSTEM SCHEMATIC DIAGRAM

DWG NO. 335-870500

C.A.T.S. 11 January

Frequency counter & alignment aid (Spectrum) - Roger, G4IDE

Now that more US hams are adding Spectrum ROM's to their T/S 2068's, the many programs in the newsletter of the Sinclair Amateur Radio User Group of Great Britain are becoming more useful. Here is an ingenious program which allows you to use your computer as an audio frequency meter.

For users of earlier T/S models see the article by KP4MD in the October 1984 issue of QZX.

This program displays the frequency of an audio tone input to the EAR socket of a 48K Spectrum. It uses the Spectrum interrupts as a timing reference & unless you have a poorly aligned Spectrum will give 0.1% or better accuracy!

The program also allows you to input a reference frequency & gives an audible indication of how near the reference frequency is to the input frequency. Be careful when entering the DATA statements - they must be EXACTLY as shown. A checksum is incorporated to trap errors.

When you RUN the program it will ask for a reference frequency; pressing ENTER at this point the program goes into counter-mode which displays the frequency input at the EAR socket, updated every second. If you input a reference frequency (line 30) then, besides displaying the frequency at the EAR socket, the program BEEPS according to the following rules. If your input is below reference frequency then it BEEPS a low tone; if above then it BEEPS a high tone. The length of the BEEP is proportional to the percentage error - if the error is 10% or greater then it's about 1 second; the BEEP gets shorter as the %-age error decreases. When the frequency is within +/- 1 Hz of the reference, then 5 short BEEPS of a middle tone are given. This sounds complicated, but in practice is very simple to use. The great benefit is that when aligning TU's, tone bursts, etc., you can keep your eyes on what you are doing & not have to keep looking at the screen. The Spectrum needs at least 500mv at the EAR socket for a reliable reading. The simple circuit below will amplify the input if needed.
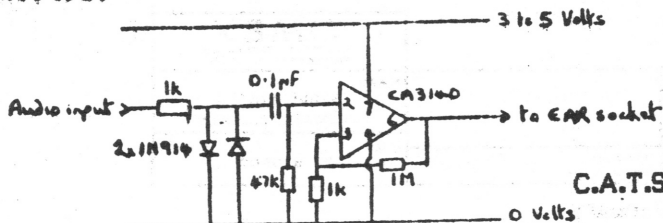
```
1 REM *** FREQUENCY COUNTER /
2 REM *** ALIGNMENT AID.
3 REM ***
4 REM *** G4IDE JANUARY 1985
5 REM ***
10 CLEAR 65278
15 LET TOTAL=0
17 FOR I=0 TO 84
20 READ A: LET TOTAL=TOTAL+A
22 POKE (65279+I),A
24 NEXT I
26 IF TOTAL<>11122 THEN PRINT "DATA ERROR!": STOP
30 INPUT "REFERENCE TONE IN HERTZ:" LINE A$
40 IF A$="" THEN GO TO 500
50 FOR I=1 TO LEN A$
60 IF CODE A$(I)<48 OR CODE A$(I)>57 THEN GO TO 30
70 LET REF=VAL A$
80 IF REF<1 OR REF>30000 THEN GO TO 30
90 LET FREQ=INT ((USR 65298)/2)
100 PRINT AT 9,14;FREQ;"   "
102 LET DIFF=FREQ-REF
103 IF DIFF>=-1 AND DIFF<=1 THEN GO TO 160
105 LET OFFSET=0
110 LET DIFF=10*DIFF/REF
120 IF DIFF<0 THEN LET DIFF=-DIFF: LET OFFSET=-50
130 IF DIFF>1 THEN LET DIFF=1
140 BEEP DIFF,40+OFFSET
150 GO TO 90
160 FOR I=1 TO 5
170 BEEP 1,20
180 NEXT I
190 GO TO 90
500 LET FREQ=INT ((USR 65298)/2)
510 PRINT AT 9,14;FREQ;"   "
520 GO TO 500
1000 DATA 1,255,243,245,58,82,255,60,254,50
1010 DATA 32,1,175,50,82,255,241,251,201,243
1020 DATA 1,0,0,175,50,83,255,50,82,255
1030 DATA 111,62,254,237,71,237,94,251,58,82
1040 DATA 255,95,58,82,255,187,40,250,95,219
1050 DATA 254,230,64,87,173,40,2,3,106,58
1060 DATA 82,255,187,40,7,62,1,50,83,255
1070 DATA 24,233,58,83,255,167,40,227,243,237
1080 DATA 86,251,201,0,0
```

Perhaps this routine can be adapted to give a 3-d display of the mandelbrot set: (MF)

ZX WORLD NEWS BULLETIN

SIN (X/13)+SIN (Y/6.5)+30

```
10 PRINT "INPUT AN EQUATION CONTAINING  X OR Y OR BOTH"
20 DIM W(2,64)
30 INPUT Z$
40 CLS
50 FAST
60 FOR Y=0 TO 21
70 FOR X=0 TO 42
80 LET Z=VAL Z$+Y
90 IF Z<W(2,X+Y+1) OR NOT Y OR X=42 THEN LET W(2,X+Y+1)=Z
100 IF Z>W(1,X+Y+1) OR NOT Y OR X=42 THEN LET W(1,X+Y+1)=Z
110 IF W(2,X+Y+1)=Z OR W(1,X+Y+1)=Z THEN IF Z<44 AND Z>-1 THEN PLOT X+Y,Z
120 NEXT X
130 NEXT Y
140 SLOW
150 PRINT AT 0,0;Z$
160 GOTO 30
GRAPH - GRAPH for ZX81/TS1000
```


Circuit diagram:
Audio input — 1k — 0.1nf — CA3100 — to EAR socket
2 IN914 — 47k — 1k — 1M — 0 Volts — 3 to 5 Volts

S C R A B B L E

A PSION Software Review

If you're tired of crashing short of the runway and failing ace status in your FIGHTER PILOT game, try this one.

Among board games, SCRABBLE has been around a long time, so it's widely known and played by all age groups - tots excepted.

Via mail order from the U.K., which is another tale, I bought the SPECTRUMized version. It's the original SCRABBLE board game in all of its features, plus a number of others that will either gladden or madden its players.

Since I date back to early SCRABBLE days, I'm accustomed to playing it Stone-age fashion (tile by tile, manually). Probably for that reason I have been alternately intrigued and annoyed by this ingenious computer adaptation from the PSION people.

But all things considered, this is powerful stuff! On LOADing, several screen prompts set up the game. One to four players are allowed. The computer can be any, all, or none of them.

In play, the computer keeps player racks filled, tallies scores, calls the next player by name, and allows that person to juggle or rearrange tiles on-screen. When the player decides to place a word, the computer puts it in the chosen space and checks for acceptable words in all directions.

If the computer is playing, you can assign it one of four levels of difficulty, but if your ego is fragile, I'd err on the safe side and set the machine at Level 1. Even there, it's a bit humbling to be bested by this hunk of machine code!

Small comfort to know that it has been given an 11,000 word vocabulary to use against its human opponents. That's roughly six times larger than what us average types can muster, and most of us don't use more than 200 words or so in our everyday speech.

When the computer is playing , you can choose to see it "think," meaning that it will then visibly try out its words on the board before deciding which one to place. It's fascinating to just watch.

A considerable amount of strategy has been programmed into the computer play: e.g.,it will not always go for the highest scoring play as it may conserve letters for another turn. While it never cheats, it distrusts humans - hence random challenges of perfectly correct words.

The computer will challenge a word not in its vocabulary, most often one that we don't spell like our British cousins. Not to worry; if you prefer "labor" over "labour" the computer will graciously accept your assurance that it's quite legitimate usage. .

If you've played SCRABBLE before, nothing is changed except the form. But it's here that I have a couple of grumps. One is that all the player racks are on-screen all the time. In my house we don't let other players see our tiles. Like poker, the play then depends on skill and deduction.

The greater problem, though, is with the screen display. The playing board itself occupies only slightly more than a quarter of the screen. The rest of the screen is taken up by the score pad, player racks, and the current player's tiles.

On a 12-inch monitor this makes for a lot of squinting to identify double and triple value spaces, even though letters themselves stand out clearly. Resolution on my 17-inch Sony make things worse. This is a game whose graphics literally beg for a high-resolution color monitor.

Credit PSION with a five-star production. It's faultless in use, and if you're a board game fan, good value for the higher-than-avarege price.

Bob Whitaker
Arlington, VA

SOFTWARE REVIEW

By Narti Kitiyakara
The Sinc Times, 10/85

Review - ZIP BASIC Compiler

Available from - Knighted Computers

    707 Highland St.

    Fulton, NY 13069

Price -$19.95 + $3.00 s/h

    The Zip BASIC compiler will change some of your BASIC programs into machine code. I say some because the chances are that you will need to write programs especially for compiling, program requirements are:
    no real numbers
    single dimensional arrays only
    one letter variable names only
    no strings
    no line numbers greater than 4999
    and the program must be relatively small.(I've only run out
        of space because of too many variables, but the compiler
        takes a good share of the memory).
  In spite of these limitations many useful programs can be compiled, and the speed of the compiled program is considerably greater than that of an interpreted one(generally over a hundred times faster). The instruction booklet provides subroutines for RND (an integer format), INKEY$ (returns the ASCII value of the key pressed), STICK, and BEEP functions, no of which are directly supported by the compiler.
    The program takes two passes at the BASIC program, during the first pass the listing is displayed, along with any errors Zip finds. If there are no errors, the second pass compiles it to machine language, and tells you the starting address for executing the program. Zip takes its time compiling the programs, however, this is excuseable since you should only use the compiler once on any one program (having developed it with the BASIC interpreter). Is Zip worth the price? Certainly it is if you don't mind typing in your programs again to fit Zip's requirements, or if you need the speed of a compiled BASIC (which is still slower than hand writen machine code, but much easier to write). Or, if you just want to play with a compiler, then it might be worth while. It does have one curious characteristic though, it won't work with HOT Z-AROS (the cartridge form of HOT Z), it just gives an out of data error, and stops. The authors do warn against using it with extra hardware installed, but it's stange (Zip does work with both the disk drive and printer I have).
    One last thing, I'm working on a FORTH disassembler/debugger, I've got the disassembler working, but I'm not quite sure what features to add into the debugger. So far it just acts as a single stepper, without allowing you to do anything. I'd appreciate any suggestions from any FORTH lovers among you.

MASTERFILE

Masterfile is a very powerful file program originally written for the Spectrum, and modified for the 2068.

The overwhelming advantage that this file program has over most other file programs is that the information you type in can be formatted in several different ways, not just one way. For instance, if you're keeping, say, a file of names and addresses, then, after you type in everybody's name, address, city, zip, phone, and any misc. information, you could have one screen show just names and phone numbers, another screen show just names and addresses, another screen formatted to print out names, addresses, city and zip in the form of mailing labels, etc., etc. You just have to type in the information once, as opposed to Vu-file, where you have to re-type all the data every time you want a new format or screen layout.

There are 4 additional features I would like to mention also:

1) You are able to spruce up each separate screen with different colors, lines, boxes, and basic designs. Besides making each screen much more visually appealing, it makes it easy to differentiate the various formats you have. (The program also has rudimentary word processing, so if you want certain information to be contained in a box, the program, will format and line-justify the data to fit into that box)

2) The program loads with five sample formats, showing you various examples of ways to arrange your data. You can either erase these, or put your own data into their formats.

3) The back of the cassette contains utilites to allow you to utilize full-size printers with either Centronics or RS-232 interfaces. (I haven't used this feature yet, so I can't comment.)

4) Masterfile contains different print sizes: 32-, 42-, and 51 column. (The documentation says this feature is borrowed from another Spectrum program, "Microprint".) Any combination of print sizes can be used in each format. Besides making each screen format more individualized, this feature can be used to emphasize the relative importance of different information on the screen.

One relatively minor disadvantage of the program is that if you want to select a certain set of records, you must select each parameter one at a time. Some file programs, most notably Profile, are more expeditious than this. (For instance, in your phone file, if you want to list everyone in Georgia with an area code of 912 and a zip code of 30376, you would have to perform 3 separate selections, instead of 1 with all 3 conditions in it.)

One possible mistake Campbell Systems made in converting Masterfile for the 2068 was that they eliminated the microdrive instructions in this version (they call this version "009"). But I'm sure they could easily be restored in a future version.

At first, the program is admittedly confusing to use. It took me about 5 or 6 hours to be able to really tap the power of Masterfile, and get it to do what I wanted. But once you are familiar with it, in my opinion, it leaves the other file programs in a cloud of dust.

Skip Romaner

LITTLE GOODIES FOR THE 2068

by George Mockridge   EDITION 3

The following "little goodies" are a collection of tips, aids, utilities, etc. that should prove helpful in 2068 programming. Special thanks to John Kuhn of the SINC TIMES in Florida and Stuart Ree of the TIMELINEZ N/L in Northern Calif. for their help. If you have a "little goodie" to share, please send it along and we will add it to the next edition.   THANKS

TIMELINEZ
P.O. BOX 1312
PACIFICA, CA 94044

****** POKE 23609,x ***********
FOR KEYBOARD CLICK (x= 1 to 255)

****** POKE 23692,2 ***********
USE BEFORE EVERY PRINT FOR AUTO-MATIC SCROLLING. WORKS LIKE THE SCROLL COMMAND ON THE 1000/1500.

****** POKE 23692,1 ***********
ANOTHER WAY TO CONTROL SCROLL. SCROLLS 22 LINES, THEN A KEY MUST BE PRESSED FOR EVERY LINE.

****** POKE 23658,8 ***********
PUT 2068 IN CAPS MODE.

****** POKE 23658,0 ***********
TAKE 2068 OUT OF CAPS MODE.

******** PAUSE 0 ***********
PAUSE UNTIL ANY KEY PRESSED.

*** POKE 23561,# (#=1 TO 35) ***
TIME THAT A KEY MUST BE HELD DOWN BEFORE IT REPEATS. PREFER 10-15 FOR TEXT.

*** POKE 23562,# (#=1 TO 5) ****
DELAY BETWEEN SUCCESSIVE REPEATS OF A KEY HELD DOWN. 3 FOR TEXT.

******* USR 15002 ************
TRY THIS TO GET OUT OF AN INFINITE INPUT LOOP W/O CRASHING

***   DIM A$(704)   ****
***   PRINT AT 0,0; OVER 1;
       PAPER 1; INK 6; A$ ****
ALLOWS YOU TO CHANGE PAPER AND INK COLOR W/O CLEARING SCREEN.

***** PRINT #1; AT 0,2; "HI" ***
***** PRINT #1; AT 1,5; "BY" ***
***** PAUSE 0   ***
PRINTS ON LINES 22 AND 23.

******* LOAD ""CODE
****** RAND USR 33792 ********
FOR PROGRAMS THAT WILL NOT LOAD.

** LET x=INT(x*10↑y+.5)/10↑y ***
USE FOR ROUNDING. x=NO. TO BE ROUNDED. y=NO. OF DEC. PLACES.

* 1 DEF FN r(x,y)=INT (x*10↑y+. *
*   5)/10↑y   *
* 2 INPUT "Enter a number ";a   *
* 3 INPUT "Round off to? ";b   *
* 5 PRINT FN r(a,b)   *
SETS THE DEFINED FUNCTION TO THE FORMULA USED TO ROUND OFF. a=NO. BEFORE ROUNDING. b=NO. OF DEC. PLACES DESIRED AFTER ROUNDING.

******* INPUT LINE A$ *********
PREVENTS COMPUTER FROM PLACING "" ON SCREEN WHEN WAITING FOR INPUT. NOTE: CAN'T USE STOP WITH THIS METHOD, BUT CAP SHIFT 6 WILL STOP. BUG IN SYSTEM.

#PRINT PEEK 23635+256*PEEK 23636
USE TO FIND STARTING ADDRESS.

******** PRINT '' ***********
GIVES LINE FEED TO PRINT STATEMENT.

******* RANDOMIZE USR 0 *******
USE TO RESET COMPUTER.

(column 2)

** INPUT AT 22,0;AT 10,0;"input
value";a$ *******
INPUT AT ANY POSITION ON SCREEN.

**** 1 FOR I=0 TO 21   **
**** 2 FOR X=0 TO 31   **
**** 3 LPRINT SCREEN$ (I,X); **
**** 4 NEXT X   **
**** 5 NEXT I   **
COPY SCREEN TO PRINTER WITHOUT USING COPY COMMAND.

******* OPEN #2,"p" ***********
SENDS ALL DATA NORMALLY DESTINED FOR THE SCREEN TO THE PRINTER.

******* CLOSE #2 ***************
CANCELS ABOVE COMMAND.

* 1 LET C=2   ***
* 2 FOR I=32 TO 255   ***
* 3 PRINT AT 0,0,""   ***
* 4 PRINT AT 0,0;CHR$ I   ***
* 5 IF CODE SCREEN$ (0,0)=0 THEN
    PRINT AT 4,C;CHR$ I: LET C=
    C+2
* 6 NEXT I   ***
LISTS CHARACTERS NOT RECOGNIZED BY THE SCREEN$ COMMAND.

******** CLEAR 63255 **********
DO THIS FIRST IF YOU PLAN TO USE UDG's IN A LONG BASIC PROGRAM THAT WILL INCORPORATE A VIDEO MODE CHANGE. A BUG IN THE SYSTEM WILL ALLOW A LONG BASIC PROGRAM TO OVERWRITE YOUR UDG's IF RAMTOP IS NOT FIRST LOWERED.

******* POKE 23750,0 **********
IF YOU ARE USING CARTRIDGE S/W THAT CAN BE STOPPED BY THE BREAK KEY, THIS WILL ALLOW YOU TO ENTER YOUR OWN BASIC LINES INTO RAM. TO RETURN TO THE CARTRIDGE ROMWARE, POKE 23750,128.

******* POKE 23693,56 *********
TO GIVE STARTING PAPER/INK COLOR

**** BASIC STARTS AT 26710 *****

******* CAPS SHIFT 3 **********
SCROLL TWO SCREENS WHEN LISTING.

******* POKE 26711,0 **********
GIVES LINE NO. 0. POKE 26711,1 TO CHANGE LINE 0 TO 1.

******* POKE 23659,0 **********
TO USE ALL 24 LINES (make program unstopable), POKE 23659, 2 resets. (Use with "INKEYS" only, INPUT resets.)

******* POKE 26710,255 *********
USE TO MAKE LINES DISAPPEAR (Makes line No. over 9999). POKE 26710,0 WILL RESET.

******* INK OR PAPER 9 ********
GIVES CONTRASTING BASE COLOR.

***** 'E' MODE/CAPS SHIFT ******
***** AND A COLOR 1 - 7   ******
GIVES INK COLOR IN LISTING.

***** 'E' MODE/UNSHIFTED ******
***** AND A COLOR 1 - 7   ******
GIVES PAPER COLOR (go back to original color at the end of the line, if not, all the lines will be the same color.)

** 1 INPUT "COMMENT";A$;CHR$ 13;
     "COMMENT";B$ ***
** 2 PRINT "COMMENT";A$;CHR$ 13;
     "COMMENT";B$ ***
EXAMPLE OF DOUBLE INPUTS.

** 9000 FOR I=1 TO 200   **
** 9010 BORDER 1:BORDER 2:
     BORDER 3:BORDER 4:BORDER 5:
     BORDER 6:BORDER 0:PAUSE 1 '**
** 9020 NEXT I:RETURN   **
GOSUB 9000 FOR A STRIPED BORDER.

******* POKE 23617,236 ********
USE TO GET A QUESTION MARK CURSOR IN INPUT STATEMENTS.

** PRINT #0;"COMMENT":PAUSE 0 **
USE TO PRINT ON LINE 24.
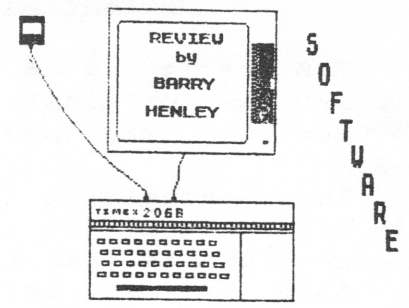
Timelinez 7-85

C.A.T.S. 16 January

(column 3)

Program Name: Taswide
Price: $14.95
Manufacturer: Tasman Software
From: E.A. Brown

So you've been using one of the word processing programs that use a 64 column display for a while and you've thought how nice it would be to be able to use the 64 column mode in other programs. You blow the dust off your Timex 2068 Technical Manual to find that it's a lot more difficult than you expected.

Now there's an easier way. There's TASWIDE. Taswide is a short utility program that can be added to just about any 2068 program that's written in basic. It's very easy to use. You can even mix 64 column lines with 32 column lines on the same screen. Even the AT and TAB commands go to 64 now. I've not found a way to LPRINT 64 columns to the 2040 printer, but a screen COPY will. The only problem I've encountered is that Taswide is stored in the same memory area as the AERCO CPI driver software. The only way to get around this is to get a copy of the relocatable CPI software. This program really adds some versatility to the T/S 2068 and I think it's well worth the money.

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UNCLASSIFIED

STAR-TREK

A game for the ZX81 TS1000 This month I'll get you started with some screen displays and instruction on playing the game and the first part of the listing.

You are commander of the Enterprise, Your mission to seek out and destroy the Klingon Fleet that has envaded Federation Space. The Galaxy is divided up into 16 Quadrants and each quadrant is then divided up into 8X8 sectors.

Your available commands are:

NAV- to navigate your ship
SHE- Shield control
LRS- Long range scan
SRS- Short range scan
TOR- Torpedo's
PHA- Phasors
DAM- Damage control
STA- Status report
COM- Computer control

computer   0- Galactic Map
sub commands   1- Game Status report
               2- Torpedo direction tracking

To Navigate from quadrant to quadrant you enter a numer from 1 to 8 incuding decimal for direction and a warp speed from 1 to 8 If you enter a decimal for warp then you will move that many sectors inside the quadrant. WARNING if you go outside the known Galaxy then only a Medusa could get you back.

Shields are allways lowered when you dock at a starbase. Which you must do from time to time to stock up on torepedos, refuel and effect repairs. (Moving will also give Scott time to repair things on the run).

The Galactic map starts out emty you must explore the galaxy to gather information fo it. You do this by taking a 'LRS' Long range Scan. it will show 6 quadrants wich will look like this:

```
*** 13 5
*** 0  310
*** *** ***
```

You are in the center position.

If there are Three #'s the first is the number of Klingons in that quadrant. the second is starbases, the third stars.

If only two numbers than starbases and stars.

If only one number ,number of stars.

Three Zeros means unexplored.(only on Galactic map) Three stars means you are at the edge of the galaxy and can go no further in that direction.

```
********************
*    S T A R T R E K *
********************
YOU MUST DESTROY 12 KLINGONS
IN 30 STARDATES
WITH 1 STARBASES
```

```
TORPEDO COURSE
3
TRACKING

        4 . 6
        3 . 6
        2 . 6
KLINGON DSTROYED
KLINGON ATTACK
250 UNIT HIT ON ENTERPRISE
SECTOR 8 , 7
```
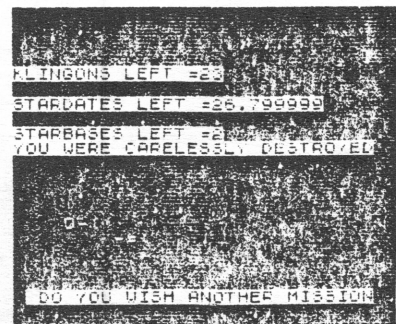Sample of TORpedo traking

---

```
CONDITION RED
STARDATE 3500
QUADRANT 5,5
SECTOR   2,2
TORPEDOS 10
ENERGY   2000
SHIELDS  1000
```

```
            4  3  2
             . . .
             . . .
MAXIMUM WARP 8    5 ---+--- 1
             . . .
             . . .
            6  7  8
```


Sample of end of game screen

```
KLINGONS LEFT =23
STARDATES LEFT =26.799999
STARBASES LEFT =2
YOU WERE CARELESSLY DESTROYED

DO YOU WISH ANOTHER MISSION
```

This program is available in our club library collection. It was written by members of LIST. Instructions from Atlanta TSUG, 1049 N Carter Rd., Decatur, GA 30030

SABER WULF:

Discouraged with trying to solve Sabre Wulf? Try this. MERGE the loader program and stop the tape. The loader program is in line 0. To change it to an editable enter POKE 23756,1. Now edit the line. Following the very last LOAD "" CODE insert :POKE 43575,255:.

RUN the program and continue loading the tape. You will now have unlimited lives when playing Sabre Wulf. Using this POKE, I was able to reach the end of the quest in about an hour and a half.

JETSET WILLY:

Even with unlimited lives, Jetset Willy is a tough games to play. If you'd like to see the conclusion of Jetset Willy, add this POKE to the program.

MERGE the loader program and stop the tape. Add a line 35 to the program:
35 POKE 41933,255.
RUN the program and continue loading the tape. When loaded, you will only have to collect one token; the one in the bathroom. Proceed to the bedroom and hop into bed. I won't spoil the rest for you.

Get unlimited lives with Jetset Willy by adding line 35 again.
35 POKE 35899,0

Computer Choice, July 1984

MANIC MINER:

There are two versions of Manic Miner. To get unlimited lives, you will have to try the following POKES.
POKE 35136,0 or
POKE 35142,0

"Spectrum 128" reported near

Bob Dyl's English Micro Connection catalogue no. 3 for September-December 1985, just released, has this exciting note on page 3:

"NEW! NEW! *The latest from Sinclair . . .* The SPECTRUM 128!

"This new computer from Sinclair is slated to be released in October. Based on the Spectrum Plus and the advanced features of the Timex/Sinclair 2068, it will feature 128K of bank-switched memory, a top quality keyboard, built-in joy-

SINCLAIR PORTABLE TO DEBUT (SOON)

Whilst we're on the new products kick, word is that there's a Sinclair ZX Spectrum portable upcoming. Seasoned Newsbyters will remember the ill-fated Timex 2068 colour clone of the Spectrum that saw out 1984 in that great American computer shop institution, the Bargain Bin. Will the new portable make it to the U.S.? Probably, and it may *sell* as well! The machine will be about the size of a Tandy Model 100 portable and feature a 5-inch flat screen mono VDU (as used in the much vaunted Sinclair flat screen TV) which will be angled towards the viewer like the old Sharp MZ series, except that it'll be at the centre back of the machine, just behind a (gasp) full typewriter keyboard. An integral 300/1200 baud acoustic modem will be included, as will communications software held in ROM. The machine will use the ubiquitous microdrive (a floppy tape cartridge system) for storage, although 72K of the 128K RAM will act as a Ramdisc in much the same way as the new Amstrad (see previous story...yawn). Oh and the price of this little marvel? "Around the 300 pound mark" says my source. Great to impress your neighbours with, but what can you DO with it?

SINCLAIR ENIGMA

Next year's model from Sinclair is the Enigma. Can it be good enough to take on the ST and Amiga on their own ground?

FULL COLOUR MONITOR

WINDOW MOUSE
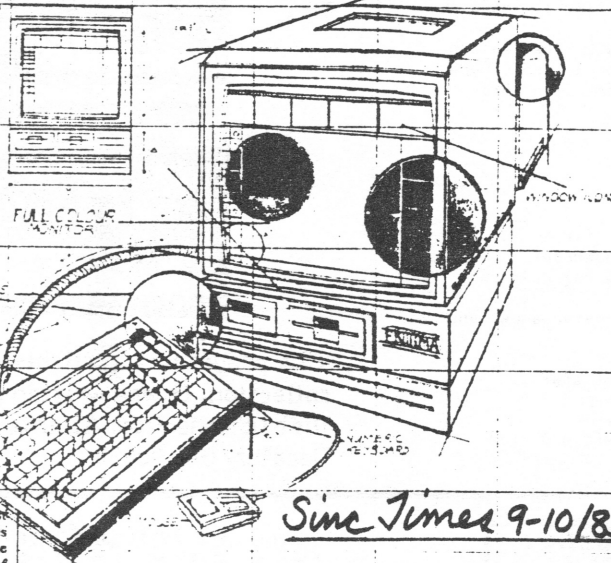
SCOOP!

Sinc Times 9-10/85

NEXT YEAR'S Enigma will be Sinclair's first Mega-machine — literally. Sir Clive believes that 1024K of Ram, one Megabyte, is the minimum needed to compete with the likes of Atari's ST and Commodore's Amiga.

He has also bowed to the inevitable and abandonned the Microdrives for a pair of built-in 3.5 inch disc drives. But the portable Spectrum-based Pandora also planned for early next year will still use Microdrives to keep down costs and weight. If Sinclair goes ahead with a portable QL that too may stay with the stringy floppies.

The Enigma is planned for launch in May '86 somewhere in the vague £500 — £1,000 price band. It will have a version of the Psion Quill, Abacus, Archive and Easel suite of programs but on Rom rather than the QL's Microdrive cartridges. The Enigma will also have a full Window, Icon, Mouse environment, probably Gem as used on the Apricot, since Digital Research has been having talks with Sinclair for some time and has publicly claimed that Gem could be ported straight across to the QL. The big question is whether Sinclair can compete with the Supermicros without going for a full 16-bit Motorola 68000 like the Amiga, Macintosh and ST rather than the cut-down 68008 in the QL.

The Enigma will be sold as a complete package; computer, software, two drives, mouse, colour monitor and printer. It might also develop with the addition of a phone and communications into a colour replacement for the Sinclair developed motochrome ICL One Per Desk — which because it was only black and white was known during its development

Sinclair is also working on a "personal communicator" a £99 cigarette packet-sized portable phone that would allow you to make and take calls on the already established cellular radio network at any time or place. With the 128, Pandora and Enigma all lined up for launch in the first half of next year there would seem to be no place for the much-rumoured QL 2 as such. This now seems to have grown into the Enigma.

Sinclair's plans look ambitious at a time when the company is making 20 of its 120 staff redundant and such senior personnel as Nigel Searle and Robb Wilmot are being kicked off the Sinclair board. The company is also losing

its bottle — or at least its converted bottle factory headquarters at Willis Road — where development work on new computers used to be concentrated and moving the entire operation to Milton Hall, country mansion of of Sinclair's Metalab.

Nigel Searle had been head of Sinclair's computer side before he was sent on a none too successful trip to America to boost Sinclair sales over there. Searle now loses his position on the board but stays on as Sinclair's top dog in the States. Robb Wilmot, Mr ICL, long-time associate of Sir Clive was brought in six months ago to develop the Sinclair/Catt wafer scale technology which promised to produce failsafe single-chip mega computers by the 1990's. Now Wilmot leaves the board and the company.

What Will He Think of Next?

Editor's Note:

The above article, published in the August 27 issue of <u>Computer Currents</u>, was written by Steve Gold. Would somebody please tell Mr. Gold what <u>he</u> can DO with it?

stick ports, and will be fully compatible with all Spectrum software! Manufactured and sold by Sinclair themselves, call for price and specifications!"

I was unable to get any information from Sinclair Research US in time for this issue, but not only did their spokesman not deny the existence of the Spectrum 128 but also gave me a name to call about it, as well as the next day he would be available. You will see the full details on this surprising development in next month's issue!

CRYPTOGRAM Solution:

LOOK FOR A GOOD APPLICATION PROGRAM. IT CAN MAKE ALL THE DIFFERENCE WHEN YOU DECIDE WHETHER YOUR COMPUTER GATHERS DATA OR DUST.

Foreign-language QLs planned

Several sources report that Sinclair's plans for the QL have become pretty ambitious, with native-language ROMs being just around the corner for most countries in Europe, including France, Germany, Denmark, and Italy. In other words, the commands in BASIC would be translated into the other languages-- for example, "HALT" in German would be used instead of STOP.

What would be intriguing, and illegal according to US laws currently restricting the export of "high-technology" items such as home computers to the Eastern bloc countries, would be ROMs for the QL for the languages using the Cyrillic alphabet, such as Russian. I know of no such plans.

Thanks for all the articles! Keep'em coming!
The editors.

Capitol Area Timex/Sinclair Users' Group
P.O.Box 725
Bladensburg, MD 20710

Name _____

Address _____

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ZX 81 _____ Printer _____

TS 1000 _____ type _____

TS 2000 _____ other interface _____

Special interest use for computer: ie, games, ham radio interface, business, other, etc. _____

Languages: Basic _____ Other _____

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Meetings are held on the second Saturday of each month at 2
P.M. in the large meeting room of the New Carrollton Branch
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Ham Radio Network Information
QZX Net...Wednesdays, 9p.m. local time; 14.345 MHz NV4F NCS
Eastern Regional Sinclair Net...Sundays, 1600 Z; 7.245 MHz
  KQ2F NCS